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Appendix

1. In an attempt to demonstrate that the assumptions underlying Dr. Bell's market share allocation approach were correct, Dr. Bell submitted results from three regression analyses,¹ [REDACTED]

[REDACTED] The principal regression analysis presented by Dr. Bell in his Appendix G compared First Response's adjusted market share against (a) variables identifying the period since the Weeks Estimator was launched and (b) a set of control variables.³ Based upon this regression, Dr. Bell concluded that [REDACTED]

2. However, Dr. Bell's regression analysis is flawed and unreliable. Dr. Bell failed to incorporate in his regression analysis important considerations present in the market, especially those that occurred around the time the Weeks Estimator was launched, and made inappropriate decisions regarding the variables that were included in his regression. I discuss below flaws with Dr. Bell's regression analysis. (The discussion below primarily relates to the augmented regression presented in the Bell Direct Testimony, Appendix G.⁵)

- a. Dr. Bell's Regression Failed To Isolate The Impact Of The At-Issue Advertising. At a high level, Dr. Bell's regression analysis attempted to measure the effect of the Weeks Estimator on First Response's market share by

² Bell Direct Testimony at 13 – 14.

³ Bell Direct Testimony, Appendix H.

⁴ Bell Direct Testimony at 13.

⁵ Bell Direct Testimony at 13 and Appendix G. Several of these critiques (i.e., (a), (b), and (d)) also apply to the original regression presented in Bell Direct Testimony at 12 and Appendix F.

comparing First Response's market share from the period before the launch of the Weeks Estimator to First Response's market share from the period after the launch of the Weeks Estimator. Dr. Bell did not include in his regression any direct measures of the at-issue advertising, either in terms of marketing expenses or effectiveness. For example, Dr. Bell acknowledged in his deposition that the regression lacked measures of TV ads, print ads, social media and in-store marketing ads for the Weeks Estimator.⁶ Dr. Bell's regression did not isolate (nor did it attempt to isolate) the effect of the at-issue advertising on First Response market share, but rather only attempts to measure the effect of the presence of the Weeks Estimator.

- b. Dr. Bell's Regression Failed To Account For Important Considerations Present In The Market. Dr. Bell's regression accounted only for selected factors that may have affected First Response's market share over the damages period, such as advertising expenditures and relative prices. However, Dr. Bell's regression did not account for many additional considerations that likely would have affected First Response's sales and market share. Dr. Bell's regression inappropriately attributed to the launch of the Weeks Estimator the impact of at least the following events.

- i. Dr. Bell's Regression Did Not Account For [REDACTED]
[REDACTED]. As described in **Section IX.B.2**, C&D introduced two [REDACTED] during the damages period [REDACTED]

Dr. Bell's regression did not include any variables that would capture the effect of [REDACTED]. Given that the effects of [REDACTED] occurred during the damages period, Dr. Bell's failure to account for the [REDACTED]

- ii. Dr. Bell's Regression Did Not Account For Clearblue Rapid Detection Promotional Pricing. As described in **Section IX.B.1**, SPD began including promotional pricing for Clearblue Rapid Detection, the Clearblue analog product around the launch of the Weeks Estimator. SPD has continued promotions on the Clearblue analog product through the present.

However, Dr. Bell's analysis did not account for the effect of these promotions on First Response's sales (and market share).⁷ Further, as Dr. Bell acknowledged, because the Clearblue Rapid Detection's promotional

⁶ Bell Dep. (DTX 837) at 242 – 246.

[REDACTED]

pricing occurred over a period that almost perfectly overlapped with the period that the Weeks Estimator had been available, Dr. Bell's regression likely would be unable to separate the effect of the promotional pricing from the effect of the Weeks Estimator.⁸ Dr. Bell's regression conflated the effect of Clearblue Rapid Detection's promotional pricing with the effect of the Weeks Estimator. Therefore, attributing the entire relationship to the launch of the Weeks Estimator overstates the actual impact of the Weeks Estimator on First Response's market share.

- iii. Dr. Bell's Regression Did Not Fully Account For The Clearblue Rapid Detection Price Drop At Walmart. As described in **Section IX.B.1**, Walmart dropped the price of the Clearblue Rapid Detection in early August 2013. The price has remained below [REDACTED] for a package containing two sticks since that date.

Dr. Bell's regression did not explicitly attempt to control for the impact of this price drop. Dr. Bell claimed that the price drop at Walmart was captured in his lagged relative price variable, but this would not account for it fully.⁹ Dr. Bell's lagged relative price variable weighted all products by sales and did not account for the extent to which they do (or do not) directly compete with First Response, even though Clearblue Analog appears to be First Response Early Result's most direct competitor.¹⁰ Further, given that Clearblue Rapid Detection has had a sub-[REDACTED] price at Walmart for the entire period that Dr. Bell characterized the Weeks Estimator as being present in the market, Dr. Bell's regression would be unable to account for the effect of this lower price. Hence Dr. Bell's regression conflated the impact of the presence of the Weeks Estimator on First Response sales and market share with the impact of the Walmart price drop.

- c. Dr. Bell Inappropriately Included Year Fixed Effects. Dr. Bell included in his final regression analysis year fixed effects, or a set of variables for each year that have a value of "1" if the week is in that year and a value of "0" if the week is not in that year.¹¹ Unlike the month fixed effects discussed below, Dr. Bell's original regression did not include year fixed effects.¹² Dr. Bell provided little or no justification for the addition of year fixed effects to his augmented

⁸ See, e.g., Bell Dep. (DTX 837) at 248 – 249. In statistical or econometric terms, a set of variables regarding Clearblue promotional pricing that were created in the same manner as those regarding the Weeks Estimator used in Dr. Bell's regression would be collinear with the Weeks Estimator variables. When variables are collinear in such a manner, a regression generally will be unable to isolate the impacts of one event (e.g., the promotional pricing) from another event (e.g., the market presence of the Weeks Estimator).

⁹ Bell Dep. (DTX 837) at 250.

¹¹ Bell Direct Testimony, Appendix G.

¹² Bell Direct Testimony, Appendix F.

regression, and their inclusion was inappropriate for at least the following reasons:

- i. Dr. Bell provided no theoretical justification for including year fixed effects; and
 - ii. Dr. Bell's inclusion of year fixed effects prevented the regression from controlling for the effect of First Response promotional activity.¹³
- d. Dr. Bell Included Month Fixed Effects Without Justification. In addition to the month fixed effects discussed above, Dr. Bell included in his regressions month fixed effects, or a set of 12 variables for each month that have a value of "1" if the week is in that month and a value of "0" if the week is not in that month.¹⁴ Dr. Bell provided little or no justification for the inclusion of month fixed effects. Dr. Bell claimed he included them because the weekly sales data "are very spiky" and "you want to allow for [] the fact that there might be month-specific behavior going on."¹⁵ However, month fixed effects do not smooth "spiky data," and Dr. Bell was unable to answer in his deposition as to why there would be seasonality in First Response market share in particular.¹⁶
3. Although Dr. Bell concluded from his regression analysis tha [REDACTED]
- [REDACTED] the aforementioned flaws and limitations demonstrate that such a conclusion is inappropriate and unreliable. In fact, because

[REDACTED]

[REDACTED] Dr. Bell did not provide an explanation as to why he would knowingly introduce collinearity, an econometric problem, into his regression.

¹⁴ Bell Direct Testimony, Appendix F, Appendix G, and Appendix H.

¹⁵ Bell Dep. (DTX 837) at 267 – 268.

¹⁶ Dr. Bell testified that studies have shown that birth rates tend to spike at certain times, such as those associated with holidays or Super Bowl victories. Bell Dep. (DTX 837) at 267 – 268. However, while such patterns might change the overall number of pregnancy test kits sold, Dr. Bell did not explain why that would change the portion of those sticks that were sold by First Response rather than other market participants.

¹⁷ Bell Direct Testimony at 13.

of the aforementioned flaws and limitations, no reliable conclusion can be drawn from Dr. Bell's regression analysis.